

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:  
NATHAN PROCH

Examiner : Christopher S. Kim  
Art Unit : 3752

Applic.: 10/609,166

Filed: 06/27/2003

For: RECIRCULATING WATER  
FOUNTAIN

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REMARKS

Applicant's undersigned attorney appreciates having had the opportunity to meet with Examiner Kim on 10 November 2004 to discuss the Office Action dated 08/24/2004.

By way of review, the present invention is directed to a recirculating water fountain incorporating an automatic shut off subsystem to prevent the pump from running dry. The shut off subsystem functions to sense the water level in the tub when the pump is running, (i.e., pump-on mode). If the "running" water level falls below a predetermined first height mark (typically attributable to evaporation), a controller shuts off the pump. When the pump shuts off (i.e., pump-off mode), water within the system, e.g., pipe, plenum, ramp, etc., drains back into the tub and raises the "non-running" water level above the first height mark. In accordance with a significant aspect of the invention, the controller prevents resumption of pump operation until the water level rises, e.g., by the user adding water, above a predetermined second height mark greater than the first height mark.

The Office Action rejects independent claims 1, 20, and 28 under 35 USC 103 as unpatentable over Ting or Nash in view of Bear. Ting and Nash both describe decorative waterfall displays in which a pump transports water from a lower reservoir to an upper reservoir from which it overflows along a visually open pathway or waterfall. As recognized by the Examiner in the Office Action, neither Ting nor Nash suggest a water level detector

1 and a controller responsive to the detector for preventing the pump from running dry.

2       Applicant discloses a detector including means (e.g., switch 50, Figure 20) for  
3 signaling when the water level in the tub, or reservoir, falls below a first height mark. A  
4 controller (e.g., CPU 70, Figure 20) responds to this low water signal to turn the pump off  
5 ("pump-off" mode). With the pump turned off, the water in the system will fall back into the  
6 reservoir which will cause the water level to exceed the first height mark. Nevertheless, in  
7 accordance with the invention, this does not cause the pump to turn back on. Rather, the  
8 pump-on mode is deferred until the detector (e.g., switch 52, Figure 20) signals that the water  
9 level has risen above a second height mark, higher than the first height mark. Only then will  
10 the controller (e.g., CPU 70) set the pump-on mode. The combination of applicant's detector  
11 and controller is believed to be novel and not commercially available.

12       Inasmuch as neither Ting nor Nash describes an automatic pump shut off function, the  
13 Examiner has cited Bear which describes a low water level sensor for a bottled water  
14 pressurization system. Initially, it is respectfully observed that none of the cited references  
15 contains any suggestion which would motivate a person of ordinary skill to modify Ting or  
16 Nash to incorporate the Bear teachings.

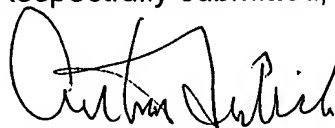
17       Regardless, however, Bear only teaches the concept of shutting off a pump when a  
18 low water level is recognized. Bear does not address the problem confronted by applicant in  
19 which water in the system flows back into the reservoir to potentially exceed the low water  
20 mark. If Ting and/or Nash were modified in view of Bear, the resulting combination would  
21 cycle excessively because the pump would shut off when the low water condition was sensed  
22 but would then promptly turn back on when the water in the system drained back into the  
23 reservoir.

24       Clearly, Bear fails to suggest Applicant's system for detecting the water level at two  
25 different height marks for preventing the pump from running dry and for avoiding excessive  
26 pump cycling.

27       Applicant's independent claims are being amended to clarify applicant's use of a  
28 detector for signaling when the water level is below a first height and when the water level is

1 above a second height and a controller responsive to the detector for turning the pump off at  
2 the low water height and preventing it from turning back on until the water reaches the high  
3 water height. It is accordingly urged that independent claims 1, 20, and 28 patentably  
4 distinguish the invention over the cited art and favorable reconsideration is courteously  
5 requested.

6  
7 Respectfully submitted,


8 

9  
10 ARTHUR FREILICH  
11 Reg. No. 19, 281  
12 Attorney for Applicant(s)

13 FREILICH, HORNBAKER & ROSEN  
14 9045 Corbin Avenue Suite 260  
15 Northridge, CA 91324-3343  
16 TEL. 818-678-6408 • FAX 818-678-6411

17  
18  
19  
20  
21  
22  
23  
24 **DEPOSIT ACCOUNT AUTHORIZATION:**

25 Throughout the prosecution of this application the Patent and Trademark  
26 Office is authorized to charge any additional fees which may be required,  
27 or credit any overpayment to Account No. 501232. Enclosed is a duplicate  
28 copy of this sheet.

27 

28 ARTHUR FREILICH, Reg. No. 19,281

**CERTIFICATION OF MAILING:**

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop: Issue Fee, P.O. Box 1450, Commissioner for Patents, Alexandria, VA 22313-1450, on December 23, 2004.



ARTHUR FREILICH